Usual and successful cognitive aging and health factors

THEMATIC SESSIONS

DEVELOPMENTAL NEUROPSYCHOLOGY (TH067)

TH067.1

Neuroanatomical (MRI) and neuropsychological indications of cerebral asymmetry in autism and childhood leukemia. *Ciesielski, K.T.(1)*, Yaeoleky, R.(2), Ludvig, R.(3), Allen, P.S.(2), Snyder, T.(2), Pabst, H.(2), Akabutu, J.(2), & Hart, B.(1) *(1) University of New Mexico, Albuquerque, USA; (2) University of Alberta, Canada; (3) Cross Cancer Institute, Edmonton, Canada.* High functioning autistic subjects (As) and post-treatment (chemo- and radiation-therapy) survivors of childhood acute lymphoblastic leukemia (ALLs) exhibit an intriguing inverse pattern of neuropsychological deficits: As are proficient at visuo-spatial organization but have pervasive language abnormality; ALLs exhibit normal speech-language-thinking but are defective in visual searching. The pattern of deficits suggests a pathology of L-hemisphere in As and R in ALLs. Planimetric measurements (mm^2) of the Frontal Temporal and Occipito-Parietal brain areas, on axial and coronal brain sections, were made on MRI images from As, ALLs and health controls (10 subjects per group). The pattern of cortical measurements was not as anticipated from the neurobehavioral deficits and analysis of subcortical structures is in progress.

TH067.2

Comparison of assessment definitions of attention deficit for statistical validity. *Cleaves, W.T.*, Palmerton, R.D., & Mathews, J.L. *California State University San Bernardino, California, USA.* Thirty-three children (7-12 years) of normal intelligence were administered an extensive psychoeducational and neuropsychological battery. A series of assessment definitions of attention deficit were compared for their statistical validity in predicting performance on attention sensitive measures. A ratio measure of Kaufman's FDDQ index to FSIQ, as well as children's relative Trails-B performance were predictive of attention deficit severity (p <..02) and covaried independent of children's specific VIQ, PIQ or FSIQ ability.

TH067.3

Evolution of non-verbal communication behaviour in patients suffering from Alzheimer's disease. de Lannoy, J.-D., *Roessli, D.*, & Séguinot, V. *Université de Genève, FAPSE, Switzerland.* Observations of non-verbal communication behaviour of 16 hospitalised patients suffering from Alzheimer's disease were made every 30" during periods of 15' over 18 months. (1) The distribution of the degree of variation in frequencies of the hand's gestures, positions of the head and directions of the look, enabled us to discriminate several sets of patients grouped under a common psychiatric syndrome; (2) the evolution in time of these behaviour's frequencies is in relation with the evolution of the disease.

TH067.4

Usual and successful cognitive aging and health factors. *Houx, P.J.*, Vreeling, F.W., & Jolles, J. *Department of Neuropsychology and Psychobiology, University of Limburg, The Netherlands.* Normal and healthy individuals (n=262) with ages ranging from 20 to 90 underwent extensive neuropsychological and neurological testing. A subdivision of these subjects was made, based on the occurrence of mild health factors possibly affecting brain functioning. Substantial differences in cognitive test performance were found between subjects who had been affected by such health factors and subjects who had not. These differences increased with the age of the subjects. Health factors accounted for a substantial part of the individual variability that increased with age. It was hypothesized that the absence or presence of health factors constitute an important determinant for successful aging.

TH067.5

Event-related potentials in reading disabled and attention deficit disordered children. *Hunter, M.*, Fulham, R., & Frost, B. *University of Newcastle, NSW, Australia.* Reading disabled and attention deficit disordered school children were matched and compared with normal controls on measures of evoked response. Visual stimuli varying in their linguistic content from abstract patterns through nameable objects to words were briefly presented on a TV monitor. The subjects were required to identify match and mismatch combinations of stimuli. Event Related Potentials (ERPs) were recorded from scalp electrodes during the performance of the task. Reaction times, evoked potential wave forms and derived topographic maps of electrical